APPLICATION FOR AN INDIVIDUAL INCIDENTAL TAKE PERMIT UNDER THE ENDANGERED SPECIES ACT OF 1973

JULY 21, 2000

BY

NORTH CAROLINA DIVISION OF MARINE FISHERIES
PO BOX 769
MOREHEAD CITY, NORTH CAROLINA 28557

252-726-7021

INTRODUCTION

The North Carolina Division of Marine Fisheries (NCDMF) requests an Individual Incidental Take Permit (ITP) under Section 10 of the Endangered Species Act authorizing implementation of management measures to protect threatened and endangered sea turtles while allowing fall gillnet fisheries for flounder and other species to be prosecuted in the southeastern portion of the Pamlico Sound.

In early November 1999, significant increases were noted in sea turtle strandings in the southeastern portion of Pamlico Sound (Sea Turtle Stranding Report Zone 35, Inshore). During November and December, a total of 97 strandings occurred in the area. Kemp's ridley turtles accounted for 46 of the strandings; 31 of the strandings were loggerhead turtles; and 20 of the strandings were green turtles. Onboard sea turtle monitoring was conducted by the NCDMF in southeastern Pamlico Sound during November 22-24, 1999. Eleven observer trips were conducted, consisting of five trips aboard deep water flounder gillnet (five inch and larger stretched mesh) vessels and six trips aboard spotted seatrout gillnet (three to five inch stretched mesh) vessels. Gear characteristics, set locations and soak times were recorded for each set. Two Kemp's ridley turtles were observed captured in deep water flounder gillnets in five observer trips. No sea turtles were captured in the observed trips aboard the small mesh gillnet vessels. While limited data are available concerning gill net takes of sea turtles (Magnuson, et al.,1990), the deep water, large mesh gillnet fishery for flounder in southeastern Pamlico Sound was suspected of being responsible for a significant portion of the sea turtle strandings. The NCDMF Marine Patrol and NOAA Fisheries Enforcement personnel conducted joint surveillance of the Pamlico Sound shrimp and

gillnet fisheries during November 1999. No shrimp trawl TED violations were detected in the area. Enforcement personnel reported significant large mesh gillnet activity in the vicinity of the strandings. On December 10, 1999, the National Marine Fisheries Service (NMFS) issued an emergency rule closing southeastern Pamlico Sound to the use of gillnets larger than five inch mesh to protect endangered and threatened sea turtles (NMFS, 1999). Strandings decreased after implementation of the closure, however many fishermen had stopped fishing for flounder prior to the closure. The closure remained in effect through January 9, 2000.

It is the intent of the NCDMF, as a provision of the requested ITP, to implement management measures in the fall gillnet fishery for flounder in southeastern Pamlico Sound that will reduce sea turtle strandings by 50 percent from September 15 - December 15, 1999 strandings levels. The NCDMF proposes to accomplish the reduction in strandings through the following management measures. Fishermen will be required to obtain a permit from the NCDMF for participation in the fall large mesh gillnet fishery in southeastern Pamlico Sound. Management measures will also be implemented for this fishery to minimize the threat of large mesh gillnets to sea turtles. A fishing operation will be allowed to set a maximum of 3,000 yards of 5 inch and larger mesh gillnet in southeastern Pamlico Sound. This yardage restriction represents a 37 % reduction in the amount of gillnet set by fishermen in the November-December, 1999 fishery. The effectiveness of the management measures will be monitored by onboard observers who will collect data on gear, catch and sea turtle interactions. Additionally, for unobserved trips, gillnet fishermen will be required to report all gear interactions with sea turtles to the NCDMF communications center which is staffed 24 hours a day or to

a NCDMF Marine Patrol officer as soon as possible after discovery of an interaction. Reporting fishermen will be required to provide information concerning the species of sea turtle, condition, whether released alive or dead, capture time, location and gear involved as a provision of their gillnet permit or by gillnet proclamations issued for management of Pamlico Sound fisheries. Fishermen will be required by the NCDMF to bring in all Kemp's ridley carcasses, irrespective of condition (stage of decomposition). Furthermore, the NCDMF will request that other species be salvaged for post-mortem examination by trained North Carolina Wildlife Resources Commission (NCWRC) or NMFS staff when feasible. The NCDMF will also request that fishermen attempt to bring in all live debilitated sea turtles for examination and treatment.

SPECIES

loggerhead turtle (*Caretta caretta*)

green turtle *(Chelonia mydas)*

leatherback turtle *(Dermochelys coriacea)*

hawksbill turtle *(Eretmochelys imbricata)*

Kemp's ridley turtle *(Lepidochelys kempii)*

The leatherback and hawksbill were listed as endangered throughout their ranges on June 2, 1970 under the Endangered Species Act of 1973 (Public Law 93-205). The Kemp's ridley was listed as endangered on December 2, 1970. The green turtle was listed as threatened on July 28, 1978, except for the breeding populations of Florida and the Pacific coast of Mexico, which were listed as endangered. The loggerhead was listed as threatened wherever it occurs on July 28, 1978.

The geographic distribution of the loggerhead includes the subtropical (and occasionally tropical) waters and continental shelves and estuaries along the margins of the Atlantic, Pacific, and Indian oceans. It is rare or absent far from mainland shores. In the Western Hemisphere, it ranges as far north as Newfoundland and as far south as Argentina.

The green turtle has a circumglobal distribution in tropical and subtropical waters. In U.S. Atlantic waters, it occurs around the Virgin Islands and Puerto Rico and from Texas to Massachusetts.

The leatherback occupies the open seas, although it is occasionally seen in coastal waters. Although it prefers warmer waters, it frequently appears in New England waters and north to Newfoundland during the summer months.

The hawksbill is typically a tropical species found throughout the Caribbean. They are commonly observed in the Florida Keys, the Bahamas, and southwestern Gulf of Mexico. Stragglers have been reported as far north as Massachusetts and as far south as northern Argentina. It is infrequently found in shallow coastal systems.

Most Kemp's ridleys occur in the Gulf of Mexico, but they also occur along the Atlantic coast as far north as Long Island and Vineyard South, Massachusetts.

Sightings of sea turtles in the Atlantic Ocean off North Carolina during 1989 - 1992 occurred throughout the year (Epperly et al., 1995). Most were sighted in May and June (1133 turtles), with much fewer in other months: July and August (406), September and October (358), March and April (246), November and December (169), and January and February (76). Most sightings were from Cape Lookout to the north along the Outer Banks. Below Cape Lookout, sea turtles were relatively common off

Onslow County. During the four year period of 1989-1992, recreational fishermen sighted turtles in nearshore ocean waters on 6.5% of their trips, as compared to 2.6% for trips that covered both inshore and offshore waters.

Sea turtle strandings in North Carolina have been increasing since 1995, the first year that the number of strandings in the state exceeded 300 individuals. Prior to 1995, annual stranding totals averaged less than 200. Strandings reached their highest level in 1999 with a statewide total of 605. Twenty two percent (n=132) of last year's strandings were found along the shores of Pamlico Sound, over half (n=67) of which were Kemp's ridleys. In 1999, Kemp's ridley (n=122) and green turtle (n=85) strandings reached their highest level and comprised 17% and 20% of the total number reported in the US respectively.

Females of all five species of sea turtles lay clutches of eggs in nests on coastal beaches. The adults aggregate off the nesting beaches during the spring to mate and the female may lay up to seven clutches during a single nesting season. After an incubation period of two months, the hatchlings dig their way to the surface and scramble to the ocean. They swim offshore and spend their early life in the offshore waters. After a few years, most species enter the coastal waters or move into bays, river mouths, and estuaries where they spend their juvenile life. There appears to be an inshore movement as the waters warm in the spring and an offshore movement as the waters cool in the late fall and early winter (Epperly et al., 1995).

PROPOSED ACTIVITY

The primary focus of the ITP will be on the protection of sea turtles through the implementation of management measures for large mesh gillnets used in the fall

flounder fishery in southeastern Pamlico Sound. However, the NCDMF will monitor all fisheries prosecuted in the area during the fall known to present a threat to sea turtles. The flounder gillnet fishery has expanded significantly in the area in recent years. A small mesh gillnet fishery for spotted seatrout is prosecuted inshore of the area where the flounder gillnet fishery occurs. The small mesh gillnet fishery does not appear to pose a significant threat to sea turtles. Trawl fisheries for shrimp and blue crabs and pound net fisheries for flounder also occur in the Pamlico Sound during the fall. These fisheries are not suspected of contributing to the sea turtle strandings that occurred in southeastern Pamlico Sound during the fall of 1999.

FISHING GEAR AND AREA:

The fall flounder gillnet fishery in the Pamlico Sound occurs predominantly in an area lying south of a line running westerly from a point on Hatteras Island, Dare County (35˚ 23' 00" N - 75˚ 30' 00" W) through the Avon Channel Entrance Beacon No. 1 (35˚ 23' 00" N - 75˚ 33' 38" W) thence westerly to Bensons Point (35˚ 23' 00" N - 76˚ 03' 42" W) at Wysocking Bay, Hyde County and east of a line running southerly from Bensons Point along the eastern edge of Bluff Shoal to the west side of Ocracoke Inlet, Carteret County (35˚ 03' 42" N - 76˚ 02' 12" W) thence running easterly and northerly along the shoreline of the Pamlico Sound back to the point of beginning (Figure 1). This area is referred to in this application as the Gillnet Restricted Area (GRA). Flounder gillnets are set in the GRA from mid-September through mid-December in waters ranging between 10 and 20 feet deep to target flounder migrating from the estuaries to offshore spawning grounds. Pamlico Sound flounder gillnets are normally hung with 5 ½ to 6 ½ inch mesh monofilament webbing, and fisherman routinely set from 2,000 to 10,000

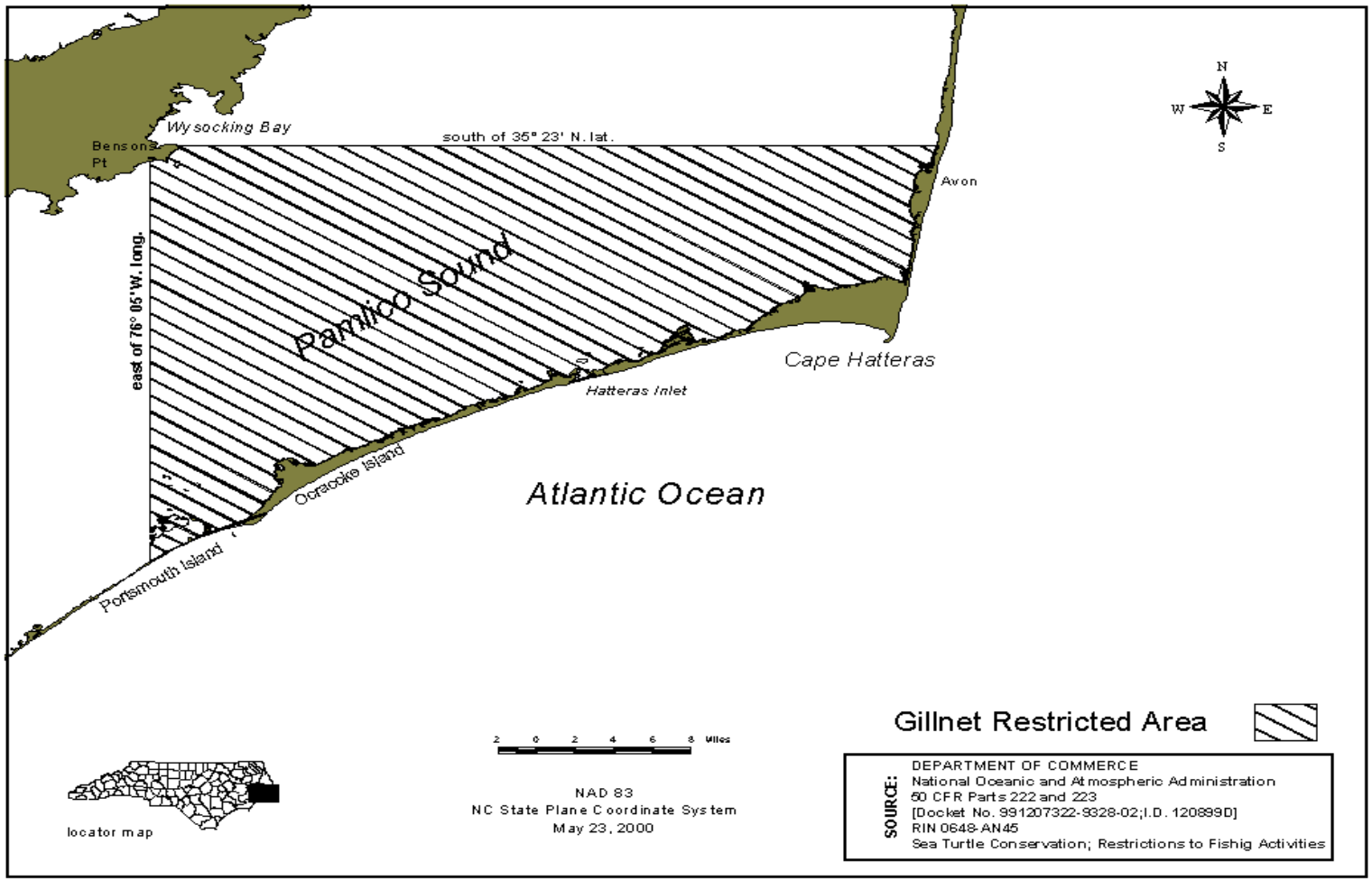

Figure 1. Map of the Gillnet Restricted Area (GRA) in Pamlico Sound, North Carolina.

yards of net at a time. Telephone interviews by NCDMF staff with flounder gillnet fishermen (n=31) indicate that in 1999 the average amount of 5 inch and larger mesh gillnet set per fishing operation was 4,750 yards. Many of the flounder gillnet fishermen use net reels to set and retrieve their gear. The nets are approximately 10 feet deep, however many fishermen use tiedowns which restrict the nets to the bottom three to four feet of the water column. The nets are constructed of small diameter (.40mm to .60mm) webbing that is hung loosely to create excess bag in the net which improves the catch of flounder. Flounder gillnets are normally fished every day or every other day depending on recent catches and weather conditions. Soak times generally range between 12 and 48 hours. It is estimated that in the fall of 1999, between 90 and 95 vessels participated in the large mesh and small mesh gillnet fisheries in the Pamlico Sound. Approximately one-half of these vessels are believed to have fished large mesh gillnets. NCDMF Trip Ticket Program information for 1999 indicates that 45 vessels greater than 25 feet in length and nine vessels less than 25 feet in length landed more than 1,000 pounds of flounder per month from September through December.

The Trip Ticket Program requires that commercial landings be reported by water body and gear. There are no subdivisions for the Pamlico Sound water body, and gillnets landings are not reported by mesh size. Flounder landings by large mesh gillnets in southeastern Pamlico Sound can not be separated from flounder landings by other gillnets set in the area. The Trip Ticket Program does allow flounder landings to be identified by gear and by month for the Pamlico Sound. Monthly values are not available from the trip ticket data, these values are derived from annual values. The

majority of the Pamlico Sound flounder landings by float and sink gillnets occur during the period September through December. It is assumed that these landings are predominately from the large mesh fishery because the minimum size limit for flounder in state estuarine waters is 13 inches. It is also assumed that the majority of the landings are from the southeastern portion of the Sound because this area serves as a fall migration route for flounder. Gillnet landings of flounder for Pamlico Sound for September through December 1998 were 714,879 pounds valued at $1,321,505. Preliminary data for 1999 indicate that 621,518 pounds of flounder were landed in the Pamlico Sound fall gillnet fishery. Preliminary data indicate that these landings were valued at $1,069,967.

The small mesh gillnet fishery for spotted seatrout is prosecuted inshore of the flounder gillnet fishery. Small mesh (3 to 5 inch) gillnets are normally set in shallow water near grassbeds or close to the shoreline. Some fishermen attend their small mesh gillnets during the fall. If the nets are left out overnight, they are normally fished every day. The number of vessels participating in the small mesh gillnet fishery in the fall is felt to be much greater than the number of vessels in the large mesh flounder gillnet fishery.

MANAGEMENT MEASURES:

The NCDMF proposes four levels of management measures for southeastern Pamlico Sound fall gillnet fisheries. The first will be implemented at the beginning of the large mesh gillnet season and remain in effect throughout the season. Implementation of second, third and fourth level (final action) management measures will be dependent upon observed mortalities from gear interactions and/or strandings.

Observed mortality levels will be extrapolated from the number of observed lethal takes, the number of trips and the percentage of observer coverage for the flounder gillnet fishery. Final action stranding response levels represent approximately one-half of the number of sea turtles, by species, that stranded in the GRA from September 15 - December 15, 1999. Should either extrapolated mortalities or strandings reach a threshold level, the NCDMF will consult with NMFS to determine the management response(s) that the data support and will implement appropriate management measures for GRA fisheries unless the NCDMF and the NMFS concur that additional management measures are not supported by the data. The NCDMF believes that this approach is consistent with the 1998 Report of the Turtle Expert Working Group (NMFS, 1998) which indicates that it is difficult to determine what portion of at-sea mortality is reflected in strandings and concludes that an estimation of the maximum number or individual loggerheads that can be taken incidentally to commercial fishing could not be made at the time of the report.

It is the intent of the NCDMF to use the provisions of the ITP to manage gillnet fisheries in the GRA to reduce the threat of this gear to Kemp's ridley, green and

loggerhead sea turtles. Although hawksbill and leatherback sea turtles are rare in North Carolina internal waters, it is requested that the ITP authorize the take of one hawksbill and one leatherback sea turtle in the event that a capture or stranding of either species occur in the fall gillnet fisheries. The inclusion of these two species in the ITP will allow the application of the management measures implemented for protection of green, Kemp's ridley and loggerhead sea turtles to also apply to hawksbill and leatherback sea turtles.

Management measures will be implemented under the authority granted to the Fisheries Director by North Carolina Fisheries Rules for Coastal Waters to issue proclamations for management of specific fisheries or Fisheries Rule 15A NCAC 3I . 0107 (b) which pertains to the protection of endangered or threatened species.

LEVEL 1 - INITIAL MANAGEMENT MEASURES FOR FALL GILLNET FISHERIES:

The following management measures will be implemented for southeastern Pamlico Sound large mesh gillnet fisheries from September 15 through December 15, 2000:

1. Fishermen will be required to obtain a NCDMF issued permit for participation in large mesh fall gillnet fisheries in the GRA.

2. An individual fishing operation will be prohibited from setting more than 3,000 yards of gillnet larger than 5 inches at any one time in the GRA.

3. Fishermen will be required to report gear interactions with sea turtles in the GRA to the NCDMF Communication Center in Morehead City, NC or a NCDMF Marine Patrol officer as soon as possible after discovery of an interaction.

4. Onboard observer coverage will be implemented for flounder gillnet and other

fisheries in the GRA as specified under the SEA TURTLE OBSERVER PROGRAM subsection of this application.

5. Fishermen will be required to bring all incidentally captured Kemp's ridley carcasses ashore for collection of biological data by NCWRC or NMFS staff. Fishermen will also be authorized to bring in the carcasses of other species if requested to do so by the NCDMF.

6. Fishermen will be authorized to bring ashore live, debilitated turtles for examination and/or treatment by NCWRC or NMFS staff.

7. Fishermen will be required to release resuscitated sea turtles outside the GRA or to transfer resuscitated sea turtles to the NCDMF Marine Patrol or NMFS for observation and release outside the GRA.

LEVEL 2 - MANAGEMENT RESPONSES:

The NCDMF will implement additional management measures if either observed gear interaction mortalities or strandings within the GRA between September 15 and December 15, 2000 reach the levels indicated below. However, if the NCDMF believes that extrapolated mortalities or strandings do not accurately reflect gillnet interactions, they will seek NMFS concurrence that available data do not support the implementation of additional fisheries management measures.

Area closures, gear restrictions, including the prohibition of tiedowns, maximum soak times, gear attendance requirements, gillnet permit modifications, increased observer coverage, or combinations of these management measures, may be implemented if observed gillnet interactions result in the death of a number of sea

turtles that, when extrapolated based on the number of trips and percent observer coverage, is a total of 24 Kemp's ridley, or 12 green, or 16 loggerhead turtles or 44 of these species in aggregate or if strandings in the GRA exceed a total of six Kemp's ridley, or three green, or four loggerhead turtles, or 11 of these species in aggregate.

Table 1 - Extrapolated observed mortalities or stranding levels that will result in Level 2 Management Responses:

Type of Turtle(s)	**Extrapolated Observed**	**Strandings**
Kemp's Ridley	24	6
Green	12	3
Loggerhead	16	4
Species in the Aggregate	44	11

LEVEL 3 - MANAGEMENT RESPONSES:

The NCDMF will implement additional management measures if either observed gear interaction mortalities or strandings within the GRA between September 15 and December 15, 2000 reach the levels indicated below. However, if the NCDMF believes that extrapolated mortalities or strandings do not accurately reflect gillnet interactions, they will seek NMFS concurrence that available data do not support the implementation of additional fisheries management measures.

Time, area or gear closures, or a combination of these management measures, may be implemented if observed gillnet interactions result in the death of a number of sea turtles that, when extrapolated based on the number of trips and the percent

observer coverage, is a total of 48 Kemp's ridley, or 20 green, or 28 loggerhead turtles or 92 of these species in aggregate or if strandings in the GRA exceed 12 Kemp's ridley, or five green, or seven loggerhead turtles, or 23 of these species in aggregate.

Table 2 - Extrapolated observed mortalities or stranding levels that will result in Level 3 Management Responses:

Type of Turtle(s)	**Extrapolated Observed**	**Strandings**
Kemp's Ridley	48	12
Green	20	5
Loggerhead	28	7
Species in the Aggregate	92	23

LEVEL 4 - FINAL ACTION MANAGEMENT RESPONSES:

The NCDMF will implement additional management measures if either observed gear interaction mortalities or strandings within the GRA between September 15 and December 15, 2000 reach the levels indicated below. However, if the NCDMF believes that extrapolated mortalities or strandings do not accurately reflect gillnet interactions, they will seek NMFS concurrence that available data do not support the implementation of additional fisheries management measures.

The use of specific gear may be prohibited or the fishery may be closed if observed gillnet interactions result in the death of a number of sea turtles that, when extrapolated based on the number of trips and the percent observer coverage, is a total

of 96 Kemp's ridley, or 36 green, or 56 loggerhead turtles or 175 of these species in aggregate or if strandings in the GRA exceed 24 Kemp's ridley, or nine green, or 14 loggerhead turtles, or 45 of these species in aggregate.

Table 3 - Extrapolated observed mortalities or stranding levels that will result in Level 4 Management Responses:

Type of Turtle(s)	**Extrapolated Observed**	**Strandings**
Kemp's Ridley	96	24
Green	36	9
Loggerhead	56	14
Species in the Aggregate	175	45

CONSERVATION PLAN

In December 1999, NMFS issued an emergency rule closing southeastern Pamlico Sound to gillnets larger than five inch mesh to protect sea turtles. As a provision of the ITP, the NCDMF proposes to use proclamation authority to implement management measures for southeastern Pamlico Sound fisheries during the fall to reduce sea turtles strandings to a level that is one-half that of September 15 - December 15, 1999 rather than closing fisheries to reduce interactions between sea turtles and commercial fishing gear. Existing proclamation authority allows the Fisheries Director to specify area, season, mesh size, means/methods, number and length for gillnets. Proclamations that are issued for management of fisheries are required by North Carolina General Statutes to be issued with a minimum of 48 hours

advanced public notice.

The NCDMF anticipates that a proclamation specifying management measures for the fall gillnet fisheries in the Pamlico Sound GRA will be issued on or before August 15, 2000 with an effective date of September 15, 2000. The proclamation is expected to require fishermen to obtain a permit from the NCDMF for participation in the Pamlico Sound fall large mesh gillnet fishery, to specify a maximum yardage for gillnets used in the large mesh flounder fishery, and require all sea turtle interactions with gillnets to be reported to the NCDMF Communications Center by marine radio or telephone or to a NCDMF Marine Patrol officer as soon as possible after discovery of an interaction. Gillnet permits will be used to identify fishermen authorized to fish large mesh gillnets in the area during the fall and as a means of monitoring fishing activity in the area. A permit must be obtained prior to beginning a large mesh gillnet operation in the GRA and will specify conditions for participation in gillnet fisheries such as the requirement to report gear interactions with sea turtles and the requirement to carry observers. Management measures may include time, area and gear restrictions or the closure of fisheries if observed sea turtle gear interaction mortalities or strandings exceed specified thresholds. The permit and proclamation(s) will inform fishermen of the requirements for participation in fall gillnet fisheries in the GRA and will serve as the primary means of ensuring compliance with the provisions of the ITP.

FUNDING:

It is the intent of the NCDMF to institute and fund all of the provisions and actions under the Incidental Take Permit except observer coverage. The NCDMF assisted a flounder gillnet fishermen with the preparation of a proposal for a North

Carolina Fisheries Resource Grant for a sea turtle observer program for the 2000 Pamlico Sound fall gillnet fishery. The proposal was submitted on June 1, 2000, if approved for funding, the observer program would begin in September 2000. In addition to the state funding request, the NCDMF has requested that the NMFS assist with the cost of observers for monitoring the fall gillnet fisheries in the GRA. Should outside funds be unavailable for the proposed observer coverage, the NCDMF will fund a limited observer program.

STEPS PROPOSED TO MONITOR AND MINIMIZE IMPACTS

The impacts of large mesh gillnet fisheries in the GRA will be monitored through permits, gear interaction reporting requirements, and onboard observers. Gear impacts will be minimized through the implementation and enforcement of management measures specified under PROPOSED ACTIVITY.

Sea turtles are recognized as either threatened or endangered in North Carolina by both the Wildlife Resources Commission and the Marine Fisheries Commission. Sea turtles come under the jurisdiction of the Wildlife Resources Commission according to the North Carolina Administrative Code (15A NCAC 10I, pertaining to Endangered and Threatened Species). Also, the North Carolina Administrative Code pertaining to Marine Fisheries (15A NCAA 3I .0107, Endangered or Threatened Species) states "Pursuant to a cooperative agreement entered into on February 5, 1979, by the Department of Environment and Natural Resources, the Marine Fisheries Commission, and the Wildlife Resources Commission, the Wildlife Resources Commission will exercise regulatory jurisdiction over any species of sea turtle, and their eggs and nests, consistent with designation of such species as endangered or threatened by the U.S.

Fish and Wildlife Service. As provided by said agreement, the law enforcement officers of both the Marine Fisheries Division and the Wildlife Resources Commission have jurisdiction to enforce any State laws and rules, including those contained in Wildlife Resources Commission Rules 15A NCAA 101, relating to endangered or threatened species of sea turtles and their eggs and nests." Additionally, this rule states: "The Fisheries Director may close or restrict by proclamation any coastal waters with respect to taking or attempting to take any or all kinds of marine resources when the method (equipment) used is a serious threat to an endangered or threatened species listed pursuant to 16 USC 1533(c). Copies of this list may be obtained from the Division of Marine Fisheries, PO Box 769, 3441 Arendell St., Morehead City, North Carolina 28557".

MONITORING:

Gear interaction mortalities or strandings of sea turtles will be monitored through the North Carolina Wildlife Resources Commission Stranding Network, gear interaction reports from fishermen, reports from fishery observers and NCDMF Marine Patrol reports of violations. When authorized by the NCDMF, fishermen will be required to bring sea turtles carcasses to the dock for necropsies by trained NCWRC or NMFS personnel. Data from the NCWRC indicate that in Zone 35, Inshore, during October, November and December 1998, there were 43 strandings consisting of 20 Kemp's ridley, 13 loggerhead and 9 green turtles and one unidentified species. During the same period in the same area in 1999, there were 102 strandings consisting of 49 Kemp's ridley, 33 loggerhead and 20 green turtles. There were no recorded strandings of hawksbill or leatherback turtles in Zone 35, Inshore in 1998 or 1999.

SEA TURTLE OBSERVER PROGRAM:

The Division has data on eleven observer trips in November 1999 in which two captures of Kemp's ridley turtles occurred, both of which were released alive. Limited data are available on the capture of sea turtles in Pamlico Sound gillnet fisheries from NMFS observer reports. The most reliable data on mortalities comes from NCWRC Stranding Network and this information is difficult to correlate with gillnet activity. The standings data provides little direct evidence that sea turtle standings in the GRA in 1998 and 199 were related to gillnet fisheries other than the fact that elevated strandings occur during periods when the fishery is most active (pers. comm., R. Boettcher, NCWRC, 2000).

Between September 15 and December 15, 2000, the NCDMF will coordinate an observer program with the flounder gillnet fleet to record information on sea turtles taken by flounder gillnet vessels operating under ITP. NCDMF Trip Ticket data indicates that there were approximately 1,500 trips completed during the 1999 fishing season. The 1999 trips were evenly distributes between ports in the Hatteras and Englehard/Swan Quarter areas. A minimum of 5 percent observer coverage or 75 trips will be achieved during the 2000 fishing season. Boats will be randomly selected by port from a list of permitted vessels. Additionally, fishermen and/or dealers will be required to submit weekly reports to the NCDMF indicating the area fished and the number of trips for determination of fishing effort.

Observers will be trained to identify, measure, and resuscitate sea turtles, check for and record external flipper tags and internal PIT tag numbers and locations and will

record all relevant data on sea turtles take in the fishery. Observers will record date, time, location (latitude and longitude, when possible) of each turtle taken, condition of the turtle (e.g., dead or alive, the presence or absence of injuries, a thorough description of all anomalies, condition of carcasses), species, sex (if determinable), straight and curved carapace measurements, and final disposition. Observers will bring in all incidentally captured Kemp's ridley carcasses and carcasses of other species when feasible. Observers will also bring to shore all live debilitated sea turtles for examination and treatment. Carcasses not brought in for post-mortem examination will be marked either with external flipper tags or spray paint prior to disposal overboard. Observers will also record all relative gear parameters and follow NMFS protocols for gillnet fishery observers, including protocols for tagging.

Other fisheries operating in Pamlico Sound during this time period will receive minimal (1%) coverage. These fisheries will include, but are not limited to, the crab trawl and small mesh gillnet fisheries. NCDMF staff will debrief each observer within 48 hours of each trip to collect information on set locations and the interactions to facilitate real time management actions. Observer data collected in the flounder gillnet fishery will allow NCDMF and NMFS to monitor the effectiveness of ITP conditions for protection of sea turtles, and to determine whether more restrictive conditions may be necessary.

COMPLIANCE:

NCDMF Marine Patrol officers will be responsible for enforcing permit and gear restrictions and monitoring fishing activities in the GRA. Enforcement costs for southeastern Pamlico Sound fisheries during the period 1998-1999 averaged

$5,000/year and this level of enforcement has been sufficient to verify compliance with existing fisheries regulations and management measures. This level of funding is anticipated to be available for Marine Patrol monitoring and enforcement of management measures in the GRA during the fall of 2000.

REPORTING:

The NCDMF will provide the NMFS Southeast Regional Office, Protected Species Branch, and NMFS Headquarters, Endangered Species Division, and the NCWRC monthly reports summarizing sea turtle takes (non-lethal and lethal) recorded in this observer program. These reports will include the total number of turtles taken, locations, species, and descriptions of any injuries. Any lethal takes will be reported to the NMFS Southeast Regional Office and the the NCWRC Stranding Network within 24 hours. The NCDMF will also provide a summary of all takes over the three month sampling period. Data will be recorded on NMFS standard observer data forms.

The NCDMF will provide the NMFS with a report of actions implemented pursuant to the ITP within 90 days of the end of the Pamlico Sound fall gillnet fishery. The report will describe management measures taken to protect sea turtles and will include information from observer trips, gear interaction reports from fishermen, NCWRC stranding reports and NCDMF Marine Patrol reports of violations in the fall flounder fishery. The NCDMF report will also include an evaluation of the program's effectiveness in protecting threatened and endangered sea turtles and recommendations for management of Pamlico Sound fall gillnet fisheries in subsequent years.

ANTICIPATED IMPACT

The proposed activity has the potential to reduce sea turtle strandings in southeastern Pamlico Sound by one-half from September 15 - December 15, 1999 levels and to document whether sea turtle strandings in the area are related to gillnet or other fisheries. If gear interaction mortalities or strandings do occur as a result of fishing activities, observer data will help identify the responsible gear and areas in which the gear is fished. The GRA lies within Sea Turtle Stranding Report Zone 35, Inshore, and is contained within Dare and Hyde counties. In 1999, there were 41 turtle strandings in this area from January through September. There were 102 strandings from October through December, of which five occurred in October, 66 occurred in November and 31 in December. The NCDMF feels that the majority of sea turtles taken incidental to fishing operations in the GRA would strand nearby because of the direction of the prevailing winds during the fall and the southwest to northeast orientation of the shoreline from Ocracoke Inlet to Buxton.

The NCDMF believes that the proposed management measures will be effective in reducing sea turtle interactions with fishing gear and in reducing sea turtle strandings from September 15 - December 15, 1999 levels. Reports from onboard observers, gear interactions, strandings and the NCDMF Marine Patrol should allow takes and strandings to be closely monitored and provide for the timely implementation of additional management measures or closures should thresholds for gear interaction mortalities or strandings be exceeded.

ANTICIPATED IMPACT ON HABITAT

The NCDMF believes that this proposed activity will have no impact on the

habitat of sea turtles; therefore, no restoration of the affected habitat is proposed.

ALTERNATIVES CONSIDERED

An alternative action considered, but rejected, by the NCDMF was to not apply for an ITP and to close the GRA to gillnet fisheries during the fall. While this action would provide protection for sea turtles, it would not allow for collection of data that might assist in the identification of sources responsible for strandings of sea turtles in southeastern Pamlico Sound during the fall. The closure of the fall flounder gillnet fishery, which was valued in excess of one million dollars in both 1998 and 1999, would have a severe economic impact on participating fishermen and the local economy.

APPLICATION

The North Carolina Division of Marine Fisheries, PO Box 769, Morehead City, NC 28557, (Phone 252-726-7021) makes application for an Individual Incidental Take Permit under Section 10 of the Endangered Species Act authorizing implementation of management measures for protection of threatened and endangered sea turtles while allowing the fall gill net fishery for flounder to be prosecuted in southeastern Pamlico Sound. It is requested that the ITP be valid for a period of one year. At the end of one year, North Carolina's ITP management measures for Pamlico Sound fall gillnet fisheries will be evaluated by the NMFS. An ITP may be requested by the NCDMF for the 2001 fishing season if it is determined that management measures are necessary and if the management measures implemented under the ITP in 2000 were effective in reducing sea turtle mortalities in Pamlico Sound fall gillnet fisheries. The ITP will

authorize the NCDMF to implement management measures in the large mesh flounder gillnet fishery, and if necessary in the small mesh gillnet fisheries, to protect sea turtles. It is estimated that approximately 60 vessels will participate in the large mesh gillnet fishery managed under the ITP.

SOURCES

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